

REMARKS

The Office Action dated December 16, 2005 has been reviewed carefully and the application has been amended in a sincere effort to place it in condition for allowance.

The disclosure was objected to because of various informalities and these informalities have been corrected herein.

Drawings

The drawings were objected to as not showing every feature of the invention claimed. Claim 17 has been amended and it refers to the embodiment illustrated in Fig. 3. In addition, the smart cable has been identified by reference character 193 in the amended sheet of Fig. 1, which is filed herewith. The specification has been appropriately amended. No new matter has been entered. A replacement sheet has been submitted pursuant to 37 CFR 1.121(d) as well as a marked up sheet which illustrates the changes in red.

Claim Objections

The objections to the claims have been addressed herein by the present amendments.

Claim Rejections – 35 USC § 112

Claim 17 has been amended to refer to the ports of the embodiment of Fig. 3.

Claim Rejections – 35 USC § 102

Claims 1, 2 and 4 were rejected under 35 USC § 102(e) as being anticipated by United States Patent No. 6,680,547 to Dailey, which issued on January 20, 2004 (“Dailey”).

Claim 2 has been cancelled. Applicant’s invention as set forth in representative amended claim 1, comprises in part:

A method for charging and maintaining the operation of a battery-powered electronic application device, including the steps of:

- (A) providing a controllable switching device;
- (B) providing a plurality of power sources each coupled to said application device via said controllable switching device, said plurality of power sources including the following:
 - (i) an AC power source;
 - (ii) a DC power source;
 - (iii) a direct oxidation fuel cell; and
 - (iv) a rechargeable battery; and
- (C) switching said controllable switching device to select between said plurality of power sources to provide operating power to said application device or to charge said rechargeable battery.

In contrast, Dailey teaches a power sharing system for powering a plurality of loads in an efficient manner. Dailey’s primary fuel source is AC line voltage. His alternative fuel sources all lead to auxiliary charger 26 in order to recharge the DC source 20.

Therefore, accordingly, the Dailey reference can not have anticipated Applicant’s invention due to the absence therefrom of *a controllable switching device to select between said plurality of power sources to provide operating power to said application*

device.... Claim 4 depends upon claim 1 and it is therefore respectfully submitted that it is also allowable over the Dailey reference.

Claim Rejection – 35 USC § 103

Claim 5 was rejected under 35 USC § 103(a) as being unpatentable over Dailey in view of United States Published Patent Application No. 2004/0175598 to Bliven (“Bliven”).

Applicant’s claim 5 is dependent upon amended claim 1 which includes a fuel cell as one of the plurality of power sources. As stated, Dailey does not include the selection between power sources to power one application device, so Dailey alone does not render claim 5 obvious. Bliven describes a fuel cell power supply for a portable computing device and a method for controlling the fuel cell power source. Bliven does not disclose, teach or suggest switching between an A/C power source, a D/C power source, a fuel cell, and a rechargeable battery as set forth in claim 5 as dependent upon claim 1. In Bliven, the battery is provided “so that power is available for control functions for a reasonable period of time for notification of fuel output for fuel cell before a full control shutdown of the defined period of time.” Bliven, paragraph 60.

Thus, Bliven does not suggest a power pack which can be switched between alternate power sources as in Applicant’s invention. Thus, Bliven alone does not render Applicant’s invention obvious. Further, the combination of Bliven and Dailey does not suggest Applicant’s invention because neither reference teaches a controllable switching device which can select among a plurality of other power sources to power an application

device. Accordingly, it is respectfully submitted that claim 5 is patentable over the cited references.

Claim 6 was rejected under 35 USC § 103(a) as being unpatentable over Dailey in view of United States Patent No. 6,806,678 to Holmes, which issued on October 19, 2004 ("Holmes").

Holmes describes a battery charger for use with a battery which includes a plurality of fuel cell modules which supply a second charging current for substantially maintaining the charge of the battery upon interruption of a first charging current. In other words, the Holmes device is a battery charger which is backed up by a set of hydrogen fuel cells for maintaining the battery, or pack of batteries, in a fully charged state so that they will be ready to deliver electrical power upon interruption of the primary power source. Holmes suggests hydrogen fuel cells and is directed to maintaining a battery supply to back up the power needs of a navigation site, communication repeater site, mission critical computer system, and even railroad crossing signals. (Col. 1, line 18-23)

Dailey describes a power sharing system which provides power and provides for maximum usage of a rechargeable power source in order to power a plurality of loads. Applicant's invention is a more simple system for powering a single application device, depending upon whether primary and alternate power sources are available. The Dailey power sharing system is a more complex system which is powering multiple loads 30A through 30C and thus utilizes the AC and DC power sources simultaneously. Applicant's invention selects one of the power sources depending upon the circumstances. Holmes, on the other hand, relates to use of hydrogen fuel cells and even when combined with

Dailey, still does not suggest Applicant's invention of providing for selection among available power sources to power an application device, including as one of the power sources, a direct oxidation fuel cell system. Accordingly, it is respectfully submitted that claim 6 is patentable over the cited references.

Claim 7 was rejected under 35 USC § 103(a) as being unpatentable over Dailey, in view of United States Patent No. 6,504,339 to Parks et al., which issued on January 7, 2003 ("Parks").

As stated by the Examiner, Dailey is silent on the operation and details of the charger and the passage in Parks referred to by the Examiner indicates that "the battery 45 may also include a battery monitoring circuit 43 that provides a signal (called CR) that when asserted "(driven high, for example) indicates a request to charge the battery 45...." (Col. 3, lines 15-17).

Applicant's invention as set forth in claim 7, depends upon claim 1, which provides "***switching said controllable switching device to select between said plurality of power sources to provide operating power to said application device or to charge said rechargeable battery.***" Neither reference, includes a controllable switching device which selects between a plurality of power sources to provide operating power to said application device or to said rechargeable battery. Dailey supplies power to several loads simultaneously and Parks recharges a battery, if a charge is needed. Therefore, neither reference alone or in combination suggests Applicant's invention as claimed in claim 7 which is dependent upon amended claim 1.

Claims 8-16, 18-20 were rejected under 35 USC 103(a) as being unpatentable over United States Patent No. 6,703,722, which issued on March 9, 2004 to Christensen ("Christensen") in view of United States Patent No. 6,787,259, which issued on September 4, 2004 to Colborn et al., ("Colborn").

In sharp contrast to Applicant's invention, Christensen describes a complex power system for serving the power requirements of a load which includes a plurality of D/C power sources and at least one fuel cell. An electronic control assembly, which is electrically coupled in voltage sensing and controlling relation relative to the respective D/C power source 11 or portions thereof, is provided. Upon sensing a predetermined operational condition of the plurality of D/C power sources or portions thereof, and/or a change of power requirements of the load 14, the control electronic selectively reconfigures the plurality of D/C power sources or portions thereof to substantially serve the power requirements of the load. (Col. 16, lines 45-54)

Applicant's invention on the other hand, is a more simple system which simply selects one of the power sources that is available, dependent upon the desired paradigm. The Applicant's device simply selects a power source, and does not need to include the sensing devices and other components as required by Christensen. Applicant's system includes a simplified switching device which selects between alternative power sources including a direct oxidation fuel cell system.

Colborn, describes a regulated D/C power supply which facilitates extended and uninterrupted power to load using a secondary power source such as a fuel cell. The D/C power supply includes a rectifier that converts A/C power from an A/C power source to a

D/C power. Colborn, on the other hand, is used for an A/C power outage, such that D/C power is provided which has been stored either in the fuel cell or in the battery. Colborn does not disclose, teach or suggest a switching device as set forth in claim 8 which is coupled to the microprocessor which is programmed to select between the different power sources depending upon predetermined conditions. Accordingly, it is believed that claim 8 is patentable over the cited references.

Claims 9-12 are dependent on claim 8 and, it is respectfully submitted that they are also patentable over the cited references. Independent claims 13 and 16, though directed towards a different functionality, include the switching device which selects between the sources and for the reasons outlined above, it is respectfully submitted that claims 13 and 16 are also in condition for allowance over the cited references.

Claim 12 was rejected under 35 USC § 103 as being unpatentable over Christensen, Colborn and further in view of United States Published Patent Application No. 2003-0165720 to DeFilippis et al. Claim 12 is dependent on claim 8 and it is therefore allowable for the same reasons cited with respect to Christensen and Colborn. DeFilippis and the present invention were, at the time the invention was made, owned by MTI MicroFuel Cells, Inc., or were subject to an obligation of Assignment to MTI MicroFuel Cells, Inc. Accordingly, Applicant respectfully urges that the DeFilippis reference is disqualified from serving as a prior art reference under 35 USC § 103(a) by operation of 35 USC § 103(c).

Claim 15 was rejected under 35 USC § 103(a) as being unpatentable over Christensen in view of Colborn as applied to claims 12 and 14 above and further in view of

United States Patent No. 6,104,162 which issued on August 15, 2000 to Sainsbury et al., (“Sainsbury”).

Christensen and Colborn have been described and distinguished herein before. Claim 15 is dependent upon claim 14 which in turn is dependent on claim 13 which includes a switching device which selects between the various power sources, under the direction of the microprocessor. Sainsbury, on the other hand, describes a method and apparatus for multipower sources for power tools. The Sainsbury reference includes multifunction power block 15 which can be powered by alternating current or direct current. In either case, the resulting power is transmitted to autovoltage selector 26 which provides a precision reference voltage to a solid state power monitor 27. The multifunction power block sets the voltage and current to be delivered to the tool motor based upon the voltage and current required to produce the tool's full rated driving torque. This in contrast to Applicant's invention as claimed in claim 15 (which is dependent upon claim 13) which includes a switching device operable to select between an A/C power source, a D/C power source and a fuel cell as directed by a microprocessor which is programmed to select between the A/C power source, the D/C power source and the fuel cell depending upon a predetermined conditions. Sainsbury does not describe the concept of programming of microprocessor to make the selection between sources based on predetermined conditions therefore claim 15 is distinguishable over the prior art cited references.

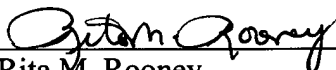
Summary

All of the objections and rejections have been addressed herein. It is respectfully submitted that the Application is now in condition for allowance. Please do not hesitate

to contact the undersigned in order to advance the prosecution of this application in any respect.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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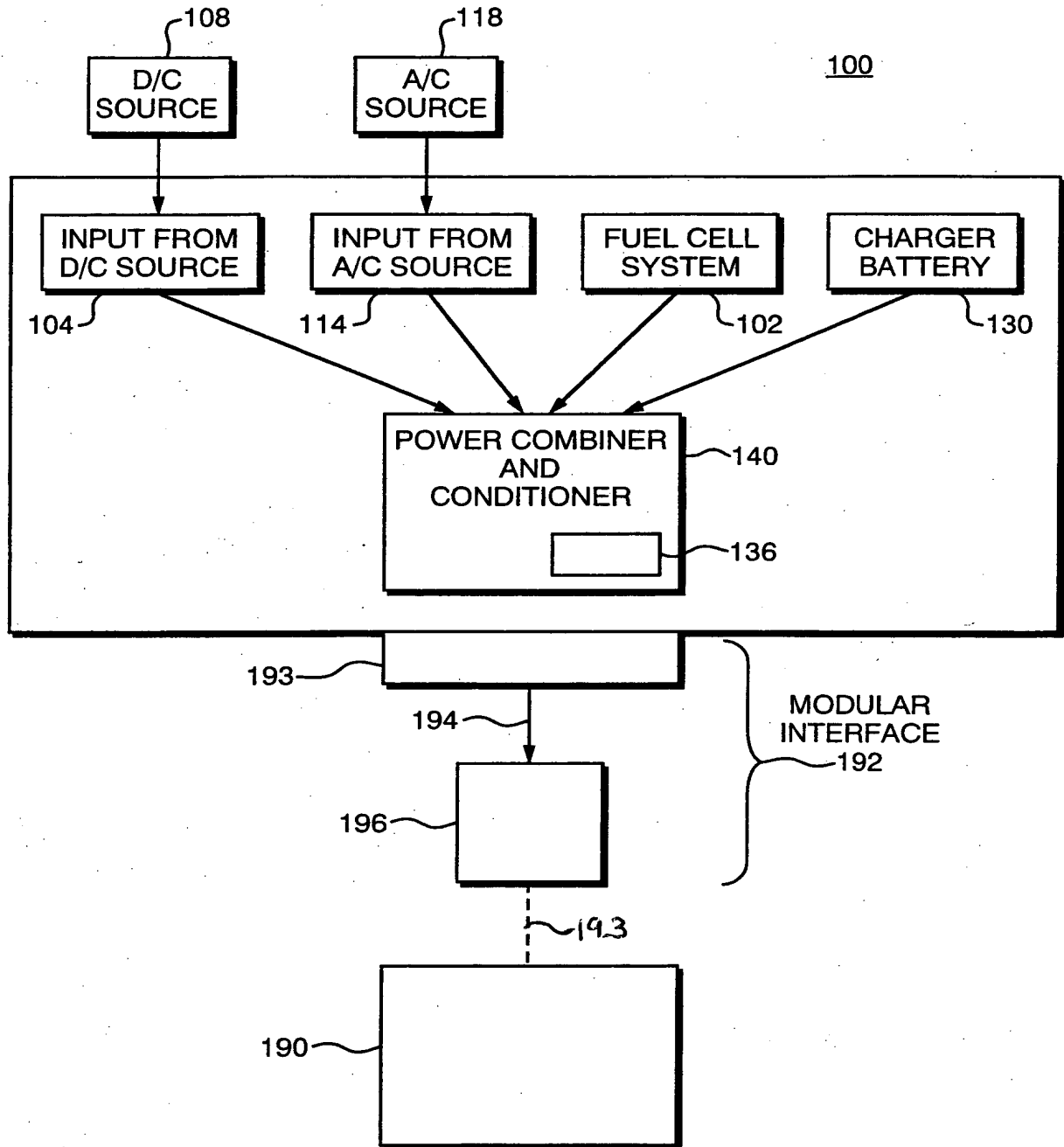


FIG. 1